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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,398	12/12/2003	Gunter Kohler	Q78757	9135
23373	7590	05/30/2006	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			HERRERA, DIEGO D	
			ART UNIT	PAPER NUMBER
			2617	

DATE MAILED: 05/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/733,398

Applicant(s)

KOHLER ET AL.

Examiner

Diego Herrera

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 12 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

Response to Amendment

Drawings

Applicant's correction on drawing is accepted by examiner; therefore, objection is withdrawn.

Specification

Examiner accepts applicant's correction on the specification; therefore, rejection is withdrawn.

Claim Rejections - 35 USC § 112

Applicant's correction on claim 8 is duly noted and examiner withdraws rejection.

Claim Objections

Examiner accepts applicant's correction on claims 1, 2, 4, 6, 7, 9, & 10; therefore, claim objections are withdrawn.

Claim Rejections - 35 USC § 101

Examiner accepts applicant's correction on claim 9; therefore, claim rejection is withdrawn.

Response to Arguments

1. Applicant's arguments filed 3/21/2006 have been fully considered but they are not persuasive.

2. In response to the applicants arguments concerning claims 1-2, the applicants features in the claim wherein a method of employing quality measure of a position measurement method for a cellular telecommunication network having define measurement areas into sub-areas for measurements to determine position or location of user equipment, reads on Green as follows.

Green is disclosing a predefined grid as shown in figure 3 & as define by applicant's specification- the grid is not correlated to the cell structure; furthermore, disclosed by the applicant is that the subset of sub-areas can be selected randomly and at times based on practical consideration which can be considered by examiner to means as shown in figure 6 of Green. As argued by applicant that the transponders are selected randomly further supports Green's reference more with set of grid as shown in figure 3 and further selecting sub-group in figure 4 for the gathering of measurements and information desired to determine location. Therefore, Green discloses sub-areas determine by base station controller (18) through base stations (14) and transponders (12) as shown in figure 5 and figure 6.

3. In response to the applicants arguments, for claim 3-12; the argument are not persuasive, in that the virtue of its dependency should be allowed, since now the examiner has shown that the reference of Green does read on the claims and the specification of applicant's disclosure presents such statement rendering Green's reference enabling. Furthermore, the combination of Green and Tayloe disclose sections in the area with first size area and second size area with predetermine sizes from larger to smaller areas, respectively. Measurements performed in according

manner with traffic patterns constrains, geographical database used to determine measurement of area and calculation render to locate mobiles in area are used. The third size section as mention in the office action does apply as another geographical area rendered by the geographical database as a section to be updated, measured, and controlled by the controller set forth in reference of Tayloe.

4. In response to the applicant's arguments, for claims 8-9, where providing a means for providing a measurement plan for the first and second measurement areas the examiner further refers to reference of Tayloe et al. col. 5 lines: 40-67 & col. 6 lines: 1-29, where is taught not only the quality of the mobile call but also the quality of coverage area of the location of the mobile measurements by the controller modifying antenna size, power control, subscriber calls, updating coverage maps, analysis and data collection. Therefore, Tayloe provides adequate support for the rejection made and reads on the limitation as stated in the combination of Green and Tayloe et al.

5. In response to the applicant's arguments, for claim 10, the examiner refers to the response to arguments of claim 9, the further clarification and citation reads on the limitation subject matter of claim 10. Therefore, the limitation reads on the combination of Green and Tayloe et al.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless: (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Green, Jr. (U.S. Patent # 5,926,133).

Consider claim 1, Green, Jr. shows and discloses a method of determining a quality measure of a position measurement method for a cellular telecommunication network, the method (Abstract, col. 7, lines: 34-44, col. 3, lines: 44-46) comprising the steps of:

Identification of a first measurement area having at least a predefined number of neighboring first cells, the first measurement area belonging to a selected class of measurement areas (Fig. 3, col. 4, lines: 66-67, col. 5, lines: 1-8).

Defining of first sub-areas in the first measurement area by applying a predefined grid on the first measurement area (Fig. 3),

Performing position measurements by means of the position measurement method in at least a sub-set of the first sub-areas (col. 5, lines: 34-48),

Determining of measurement errors for the position measurements (col. 7, lines: 34-44),

Determining of the quality measure based on the measurement errors (col. 8, lines: 55-65).

Consider claim 2, as applied to claim 1 above, Green, Jr. shows and discloses a method whereby the first class is defined by a minimum first size of the first cells and further comprising (Fig. 3):

Identification of a second measurement area having at least the predefined number of neighboring second cells, each one of the second cells having a maximum

second size, whereby the second size is smaller than the first size (col. 8, lines: 59-67, note: the reference point out a different configuration for an urban area which is interpreted by the examiner to mean smaller and higher density of user and cells concentrated in that environment. This would imply that there would be a bigger area {first class} and a smaller area {second class}),

Defining of second sub-areas in the second measurement area by applying a second predefined grid on the second measurement area (col. 5, lines: 34-48),

Performing position measurements by means of the position measurement method in at least a sub-set of the second sub-areas (col. 7, lines: 34-44).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3 & 11-12 rejected under 35 U.S.C. 103(a) as being unpatentable over Green, Jr. (U.S. Patent # 5,926,133) in view of Spirito M A et al. (Preliminary experimental results of a GSM mobile phones positioning system based timing advance).

Regarding claims 3 & 11-12, and as applied to claim 2 above, Green, Jr. discloses the claimed invention except selecting of at least a predefined fraction of the first and second sub-areas for the subset and performing a specified minimum number of position measurements per sub-area and each one of the measurement routes having measurement route segments which are about evenly distributed in the respective measurement area.

However, Spirito M A et al. discloses selecting of at least a predefined fraction of the first and second sub-areas (Paragraphs 10-11, 'The field trial was carried on in rural {first class} and urban {second class}/suburban areas...Two regions {first sub-areas} in a rural environment and two regions {second sub-areas} in an urban environment') for the subset and performing a specified minimum number of position measurements per sub-area (Paragraphs 20-23, 'This analysis aids the design of the EKF, in which the

model of the distance measurements obtained from TAs is defined as the correct MS-BTS distance plus a white Gaussian sequence...to completely describe the Gaussian measurement error model...').

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify the system Green, Jr. for having at least a predefined fraction of the first and second sub-areas for the subset and performing a specified minimum number of position measurements per sub-areas by adding Spirito M A et al. for the purpose of assessing the measurements' reliability (Paragraph 34).

Claim 4 rejected under 35 U.S.C. 103(a) as being unpatentable over Green, Jr. in view of Sendonaris et al. (U.S. Patent # 6,141,552).

Regarding claim 4, and as applied to claim 2 above, Green, Jr. discloses the claimed invention except identification of at least an additional third measurement area having the predefined number of neighboring third cells, the third cells having at least a third intermediary size between the first size and the second size, defining of third sub-areas in the third measurement area by applying a third predefined grid on the third measurement area, providing a measurement route for each one of the measurement areas, each one of the measurement routes having a length of a multiple of the square root of the respective measurement area.

However, Sendonaris et al. discloses identification of at least an additional third measurement area having the predefined number of neighboring third cells (Fig. 2), the third cells having at least a third intermediary size between the first size and the second size (Fig. 2, col. 3, lines: 58-65), defining of third sub-areas in the third measurement

area by applying a third predefined grid on the third measurement area, providing a measurement route for each one of the measurement areas (Fig. 7, col. 8, lines: 25-32), each one of the measurement routes having a length of a multiple of the square root of the respective measurement area.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify the system of Green for identification of at least an additional third measurement area having the predefined number of neighboring third cells, the third cells having at least a third intermediary size between the first size and the second size, defining of third sub-areas in the third measurement area by applying a third predefined grid on the third measurement area, providing a measurement route for each one of the measurement areas, each one of the measurement routes having a length of a multiple of the square root of the respective measurement area by adding Sendonaris et al. for the purpose of circumscribing areas that are of intermediary size of that of the first and second class areas and leaving no gaps in the network between the first and second class areas.

Claim 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Green, Jr. in view of Sendonaris as applied to claim 4 above and further in view of Spirito M A et al. (Preliminary experimental results of a GSM mobile phones positioning system based timing advance).

Regarding claim 5, and as applied to claim 4 above, Green as modified by Sendonaris does not disclose each one of the measurement routes having measurement route segments that are about evenly distributed in the respective

measurement area (Paragraphs 12-18, note: reference mentions distances and measurements of routes).

However, Spirito M A et al. disclose that each one of the measurement routes having measurement route segments which are about evenly distributed in the respective measurement area (Paragraphs 12-18, note: reference mentions distances and measurements of routes for the different size measurement areas).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify the system by the combination of Green/Sendonaris to further modify the method each one of the measurement routes having measurement route segments which are about evenly distributed in the respective measurement area by adding Spirito M A et al. for the purpose of validity of position information (Paragraphs 21-23).

Claim 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Green in view of Sendonaris as applied to claim 6 above, and further in view of Walczak et al. (U.S. Patent Application Publication # 20020098851).

Regarding claim 6, and as applied to claim 4 above, Green as modified by Sendonaris does not disclose the position measurements being performed at equidistant points of time or distance while traveling along the measurement route.

However, Walczak et al. discloses the position measurements being performed at equidistant points of time or distance while traveling along the measurement route (Paragraphs 27 and 43, note: ...a time attribute, for example the time of acquisition of the signal, is associated with the location or position or speed or velocity information

derived from the sampled signals or with the signal data from which the information is derived...or is a function of, an interval of time that passes between generation of the reference location fix and the location fix for which the validity determination is desired).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify the method of the combination of Green/Sendonaris for each one of the measurement routes having measurement route segments which are about evenly distributed in the respective measurement area by adding Walczak et al. for the purpose of a more accurate and valid measurement of position (Paragraphs 27 and 43).

Regarding claim 7, and as applied to claim 4 above, Green and Sendonaris as modified by Walczak do not disclose providing a speed profile for performing of the position measurements when traveling along the measurement route.

However, Walczak et al. further modifies providing a speed profile for performing of the position measurements when traveling along the measurement route (Paragraphs 26 and 44)

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify the method of the combination Green/Sendonaris for providing a speed profile for performing of the position measurements when traveling along the measurement route by adding Walczak et al. for the purpose of gathering information of the mobile station for further processing (Paragraphs 26).

Claims 8, 9 and 10 rejected under 35 U.S.C. 103(a) as being unpatentable over Sendonaris et al. in view of Tayloe et al. (U.S. Patent # 5,095,500).

Regarding claims 8 & 9, Sendonaris disclose neighboring cells of different sizes except a computer program stored in a computer readable medium, for planning of position measurements for the purpose of determining a quality measure of a position measurement method for a cellular telecommunication network, comprising program code/instruction for performing the steps of: accessing of cartographic and network topology data for the cellular telecommunication network, identification of a first measurement area having at least a predefined number of neighboring first cells, the first cells having at least a first size, the identification being performed on the basis of the cartographic and/or network topology data, defining of first sub-areas in the first measurement area by applying a predefined grid on the first measurement area, identification of a second measurement area having at least a predefined number of neighboring second cells, each one of the second cells having a maximum second size, whereby the second size is smaller than the first size, the identification being performed on the basis of the cartographic and/or network topology data, defining of second sub-areas in the second measurement area by applying a predefined grid on the second measurement area, providing a measurement plan for the first and second measurement areas.

However, Tayloe et al. discloses and shows a computer program stored in a computer readable medium, for planning of position measurements for the purpose of determining a quality measure of a position measurement method for a cellular

telecommunication network, comprising program code/instruction for performing the steps of: accessing of cartographic and network topology data for the cellular telecommunication network (col. 2, lines: 39-41), identification of a first measurement area having at least a predefined number of neighboring first cells (Fig. 2), the first cells having at least a first size, the identification being performed on the basis of the cartographic and/or network topology data, defining of first sub-areas in the first measurement area by applying a predefined grid on the first measurement area (Fig. 2), identification of a second measurement area having at least a predefined number of neighboring second cells, each one of the second cells having a maximum second size, whereby the second size is smaller than the first size, the identification being performed on the basis of the cartographic and/or network topology data, defining of second sub-areas in the second measurement area by applying a predefined grid on the second measurement area (Fig. 4), providing a measurement plan for the first and second measurement areas (col. 4, lines: 62-68, col. 5, lines: 1-11, note: monitoring is considered as measurement plan).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify the method of Sendonaris to have a computer program stored in a computer readable medium, for planning of position measurements for the purpose of determining a quality measure of a position measurement method for a cellular telecommunication network, comprising program code/instruction for performing the steps of: accessing of cartographic and network topology data for the cellular telecommunication network (col. 2, lines: 39-41),

identification of a first measurement area having at least a predefined number of neighboring first cells (Fig. 2), the first cells having at least a first size, the identification being performed on the basis of the cartographic and/or network topology data, defining of first sub-areas in the first measurement area by applying a predefined grid on the first measurement area (Fig. 2), identification of a second measurement area having at least a predefined number of neighboring second cells, each one of the second cells having a maximum second size, whereby the second size is smaller than the first size, the identification being performed on the basis of the cartographic and/or network topology data, defining of second sub-areas in the second measurement area by applying a predefined grid on the second measurement area (Fig. 4), providing a measurement plan for the first and second measurement areas (col. 4, lines: 62-68, col. 5, lines: 1-11, note: monitoring is considered as measurement plan) for by adding Tayloe et al. for the purpose of effectively diagnose coverage deficiencies in different size areas and take the necessary corrective action for the measurement plan.

Regarding claim 10, and as applied to claim 9 above, Tayloe et al. inherently discloses and shows a computer system for planning and/or optimization of a cellular telecommunication network (col. 2, lines: 39-41), the computer system comprising: means for providing cartographic and network topology data of the cellular telecommunication network (col. 2, lines: 39-41), means for identification of a first measurement area having at least a predefined number of neighboring first cells, the first cells having at least a first size the identification being performed on the basis of the cartographic and/or network topology data, means for defining of first sub-areas in the

first measurement area by applying a predefined grid on the first measurement area (Fig. 2), means for identification of a second measurement area having at least the predefined number of neighboring second cells, each one of the second cells having a maximum second size, whereby the second size is smaller than the first size, the identification being performed on the basis of the cartographic and/or topology data, means for defining of second sub-areas in the second measurement area by applying a second predefined grid on the second measurement area (Fig. 4), means for providing a measurement plan for the first and second measurement areas (col. 4, lines: 62-68, col. 5, lines: 1-11, note: monitoring is considered as the measurement plan by the examiner).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Diego Herrera whose telephone number is (571) 272-0907. The examiner can normally be reached on Monday-Friday, 6:30AM-3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kincaid G. Lester can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

D.H.


NICK CORSARO
PRIMARY EXAMINER